HERO

INNOVATIVE COLOR TECHNOLOGY

- **EUREKA**
- **A450 – A550**

Automatic colorant dispenser

USER MANUAL

Declaration of Compliance with the CE Regulations

HERO EUROPE S.r.l.
Fraz. Buretto, 12/A
12041 – Bene Vagienna (CN)
ITALY

Declares that:

The Automatic Dispenser model: **EUREKA A-450 – A550**
Serial number:____

Is in compliance with the EC Machinery Directives:

Machinery Directive 2006/42/CEE
Low tension 2006/95/CEE
Electromagnetic Compatibility 2004/108/CEE

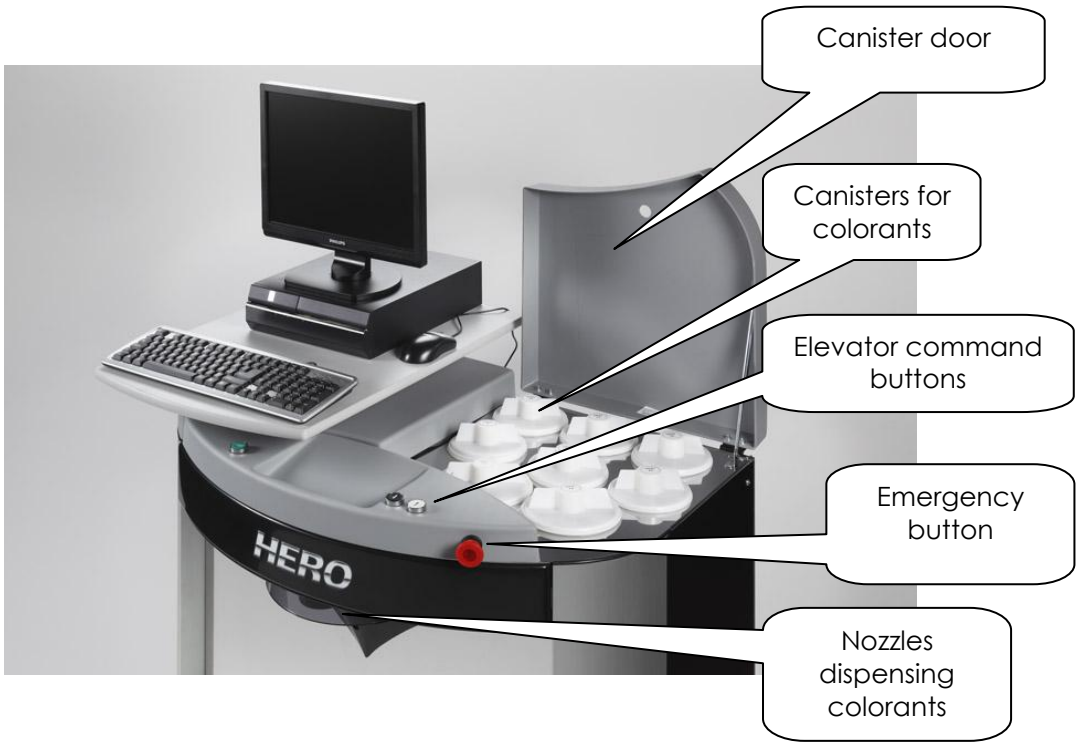
Is in compliance with the standardized European Regulations:

EN 292-1, EN 292-2, EN 418 & EN 1050
EN 60204-1
EN 61000-6-2, EN 61000-6-3, EN 61000-3-2 & EN 61000-3-3

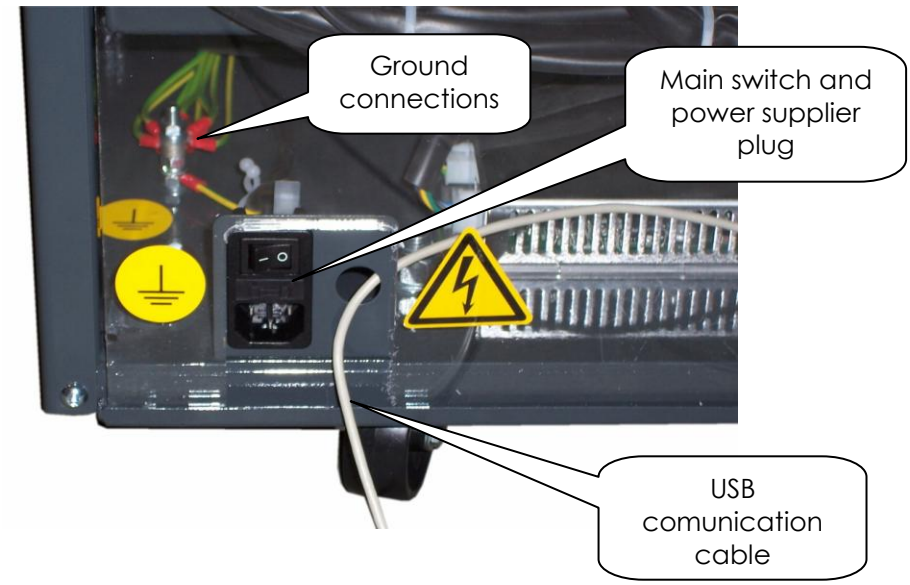
HERO EUROPE S.r.l.
Fraz. Buretto, 12/A
12041 – Bene Vagienna (CN)
ITALY

Alessandro Sacchet
Chairman
HERO EUROPE S.r.l.

EUREKA Automatic Dispenser key



PC sliding plane
Identification Label with trade mark and certification logos
Cartridge Pumps
Electronic Board (PCB)


Ground connections
Main switch and power supplier plug
USB comunication cable

GENERAL CONDITIONS

By choosing EUREKA automatic colorant -dispensing machine manufactured by HERO EUROPE, you have selected a product which represents the result of intensive research in the field of high-tech fluid-dosing equipment. Top quality material, modern designing tools such as the use of CAD three-dimensional parametrical systems, together with the attention given to ergonomics, guarantee an easy to use, long lasting machine.

The machine is in compliance with the 89/392/EEC directive regarding machinery, the 89/336/EEC directive regarding electromagnetic compatibility, as well as the 73/32/EEC directive regarding electrical equipment to be used within a specific tension range compiled by the European Community Council of Ministers, and is provided with the EC trademark.

The handbook explains how to install an HERO EUROPE automatic dispenser and provides all the necessary information in order to insure easy use and good maintenance.
It is very important to read the handbook carefully and completely before implementing any task on the dispenser, in order to work with the machine in perfect conditions
The dispenser carries out sequential dosing of colorant pastes for the production of paints in the colors requested, by means of progressive cavity volumetric pumps. **It is absolutely forbidden to start the pumps, either by hand or through automatic cycles, if there is no colorant in the relative tank. Should this occur, irreparable damage would be caused to the pump.**
36 hours is the maximum allowed time between one agitation cicle and the other.
To ensure good functioning of the machine, the few, simple tasks requested must be implemented within due time and solely by authorized technicians. Good functioning of the dispenser is guaranteed if the place in which it is installed fulfils the following characteristics:
· Room temperature: **15÷40°C**
· Relative humidity: **30÷90%**
The dispenser must be connected to an electric installation with a totally efficient grounding system.
The dispenser warranty will no longer be considered valid should any of the above mentioned criteria not be respected.
For technical assistance, please contact the vendor's engineering department.

This handbook should be kept in a safe place

TERMS OF WARRANTY

The EUREKA automatic dispenser terms of warranty are summarized as follows:

1. HERO EUROPE provides a one year warranty on the correct functioning of the products supplied, except for break downs due to normal usage. If a breakdown is not covered by the warranty, the counterpart will be charged for the inspection, implemented by HERO EUROPE, to determine whether the breakdown is covered by the warranty or not. Should the break down result covered by warranty, HERO EUROPE will deliver an identical or equivalent product. The terms of warranty, herewith described , solely apply if the products supplied by HERO EUROPE are used in compliance with what is stated in the handbook. The number of working hours necessary to implement the work related to the warranty, together with transfer time, travel, meals and accommodation expenses will be calculated according to current tariffs.

2. Derogating what is above mentioned, HERO EUROPE is not obliged to respect any terms of warranty if:
    a. The product was repaired or attempted to be repaired by the counterpart or by a third party, unless HERO EUROPE previously refused to repair the product at a reasonable price;
    b. HERO EUROPE demonstrates that no defect was detected after testing;
    c. The counterpart did not immediately and precisely communicate the breakdown to HERO EUROPE, when possible, in writing and/or via fax, and/or did not carefully follow HERO EUROPE's instructions;
    d. The counterpart used or treated the product incorrectly or differently to what was established by HERO EUROPE;
    e. The damage was originated by circumstances that occurred during transport or installation and cannot be verified by HERO EUROPE.

3. From now on, with the definition "program" we intend the standard computer program that HERO EUROPE has put at the counterparts disposal , based on computer software and on relevant documents (Software handbook), including any improved or updated versions. With the definition "PC" we intend the machine to which the program is associated and should solely be used in relation to such program.

4. The counterpart has the right to copy the program partially or completely (up to a maximum of two copies) for internal security reasons; the copies must bear the same trademarks, indications pertinent to copy right and any other identification marks present on the original version of the program.

5. The counterpart does not have the right to modify, translate, decode or adapt and reconduct the program to its original code unless specific written consent is granted by HERO EUROPE. Furthermore, if requested by the counterpart, HERO EUROPE must provide information on how to obtain effective program interchange with another software.

6. In case of PC breakdown, the counterpart has the option to use the program on another PC until the broken PC functions again, however, HERO EUROPE must be notified within 5 days.

7. In case of PC break down, the PC manufacturer's terms of warranty will be considered valid, even if the PC was supplied by HERO EUROPE.

8. Should a definite transfer of the program to another PC result necessary, the counterpart must ask HERO EUROPE to provide written consent, which cannot be refused on unreasonable grounds.

SAFETY INSTRUCTIONS

Please read the instructions carefully before installing and operating the machine, as a personal safety measure as well as to avoid needless damage to the machine

HERO EUROPE declines any responsibility should the following instructions not be followed:

- Do not turn on a damaged machine (for example, if the machine is damaged during carriage). If in doubt, first contact the back up service or the reseller.
- Position and connect the machine by carefully following the installation instructions and by respecting the conditions stated in this handbook.
- All the instructions and local safety regulations must be observed.
- The machine must only be connected to a wall socket assembled according to regulations, with the grounding circuit and the tension value in compliance with what is written on the machine plate.
- The user must maintain the machine in good working condition and replace any broken components.
- Any assistance on the machine, other than routine, can only be carried out by a qualified technician. **Make sure that the power cable is not plugged into the socket whilst the machine is being repaired.**
- A standard machine is solely suited to dosing water-diluted colorant pastes in standard paint cans.
- The elastomer parts inside the dosing circuits could undergo damage if other thinners are used.
- Never set the dosing pumps going if there is no colorant in the respective circuit, otherwise the friction within the pumps would lead to an increase in temperature capable of damaging the pumps.

MACHINE POSITIONING AND INSTALLATION

Instructions for correct positioning

Be certain to respect the following details whilst positing the machine:

- Place the machine on a steady, horizontal surface by using a level.
- The area must be well ventilated. To avoid pastes from drying, make sure the machine is not exposed to the sun or near heaters or any other source of heat.
- The surrounding temperature should be kept as constant as possible, around 18°C (and anyhow, always between 15÷40°C) so as to prevent variations in the specific weight and viscosity of the pastes.
- Make sure the machine is only connected to a wall socket assembled according to regulations, with its grounding circuit and tension value in compliance with what is written on the machine plate.

Machine unpacking

- Remove the external extensible nylon film from the package
- Remove the fastening straps placed around the outside of the packaging box
- Remove the packaging box by lifting it upwards

Pallet removal

Carefully manoeuvre the machine backwards with two people behind and one person in front of it, then slowly put the machine down on its rear wheels as shown in the pictures below. Without altering the position of each person, tilt the machine backwards until the pallet is free and easily removed. Once the pallet has been removed carefully place the machine down on its wheels.

Machine positioning

The EUREKA dosing machine is fitted out with wheels and levelling feet. When the machine rests on its wheels and is positioned on a hard, well levelled floor it can be easily shifted by pushing it by hand.
Locate the machine where it is intended to be put to use, then lift the feet and verify that the dispenser is in a steady, well levelled position.

Computer and monitor assembly

The EUREKA dispenser is provided with a shelf in the upper part of the machine at an ergonomic height of approximately 110 centimetres. The shelf can be used to position the PC , the LCD monitor and the keyboard, or in alternative a laptop computer Moreover, the PC could also be placed in another compartment located in the lower part of the machine, just under the can lodging. After having positioned the PC, you must connect it to the electronic card that commands and controls the dispenser. In order to do so, you will find a USB connecting cable included inside the package.

On one side, connect the USB cable to the appropriate socket positioned on the electronic card of the dispenser, whilst on the other side, connect it to one of the USB sockets on the PC. A correct configuration of the USB port of the PC will be made possible by using the software provided with the dispenser.

We suggest to use the upper shelf of the dispenser to position the PC so that it is totally protected from possible colorant spills or leakages.

Starting the dispenser

Connect the power cables of the machine and the PC to a wall socket (refer to what is stated in the paragraphs regarding “General conditions” and “Safety instructions”) then turn on the PC.

By following the instructions in the software handbook, install the software, which is provided with the machine, on the PC.
Load the colorants into the storage tanks but be careful not to exceed the limit.

Carry out the following procedure to load the colorants:

- Open the upper door of the machine.
- Remove the lid.
- Fill the canister, but be very careful not to spill any colorant on the central part of the mixing vane however protected by a cap to preserve the internal leakage.
- Replace the lid once the canister has been filled.
- Close the upper door.

After having loaded all the circuits, the calibration procedure must be implemented before being able to use the machine.

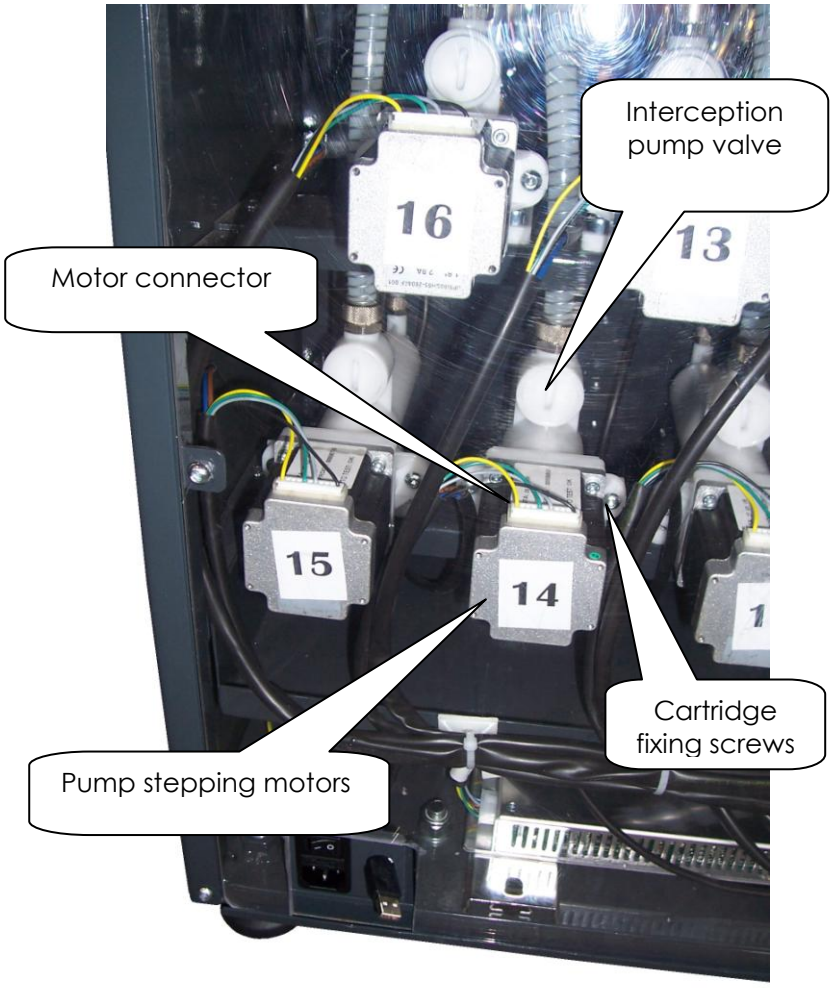
A precision scale is necessary to accomplish the calibration procedure.

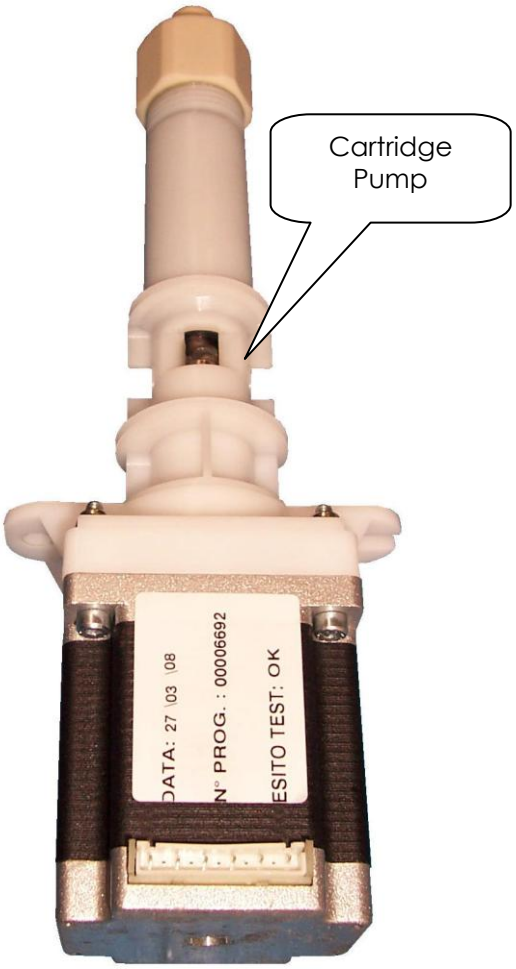
Please refer to the software handbook for instructions regarding calibration.

CARTRIDGE PUMP SUBSTITUTION

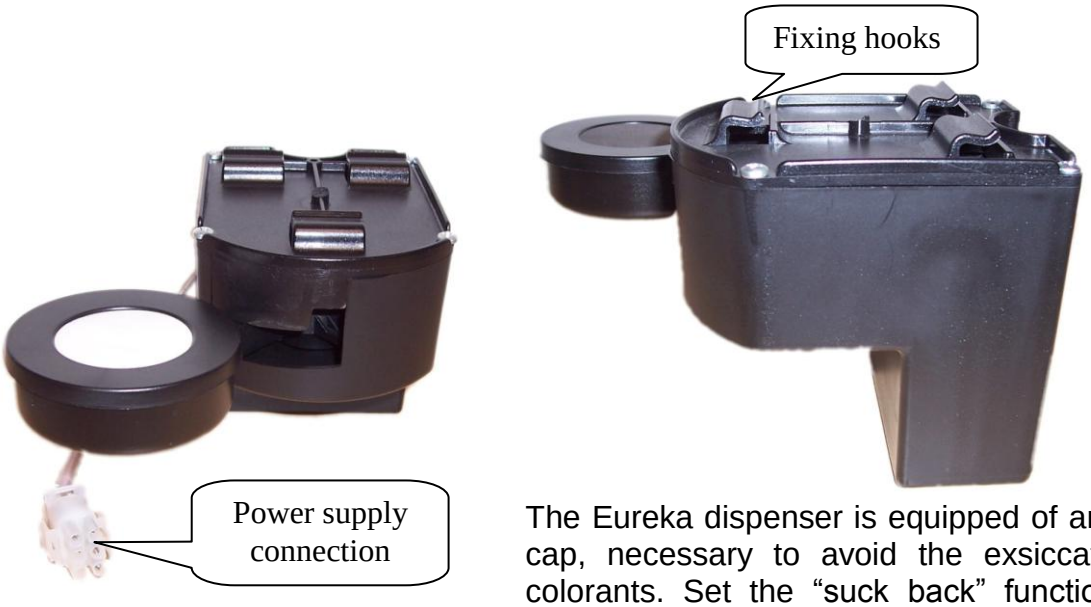
When a pump needs to be replaced please proceed as follows:

- In order to disconnect the machine's power supply, pull the power plug out of the socket.
- Remove the transparent panel placed in the back side of the machine
- Disconnect the pump connector that you intend to substitute.
- Close the integrated valve onto the external body pump.
- Unscrew the 2 screws which fixed the cartridge pump.
- Put out the cartridge from its slot.
- Insert a new cartridge into its slot.
- Fix the cartridge by the 2 screws previously unscrewed.
- Reopen the valve.
- Connect the electric motor power cable that starts the canister pump. **CAUTION: make sure the plug is well connected and completely pushed into the socket.**
- Put back the rear panel paying attention of power and USB communication cables.
- Give back the power supply to the machine reconnecting the plug previously disconnected.



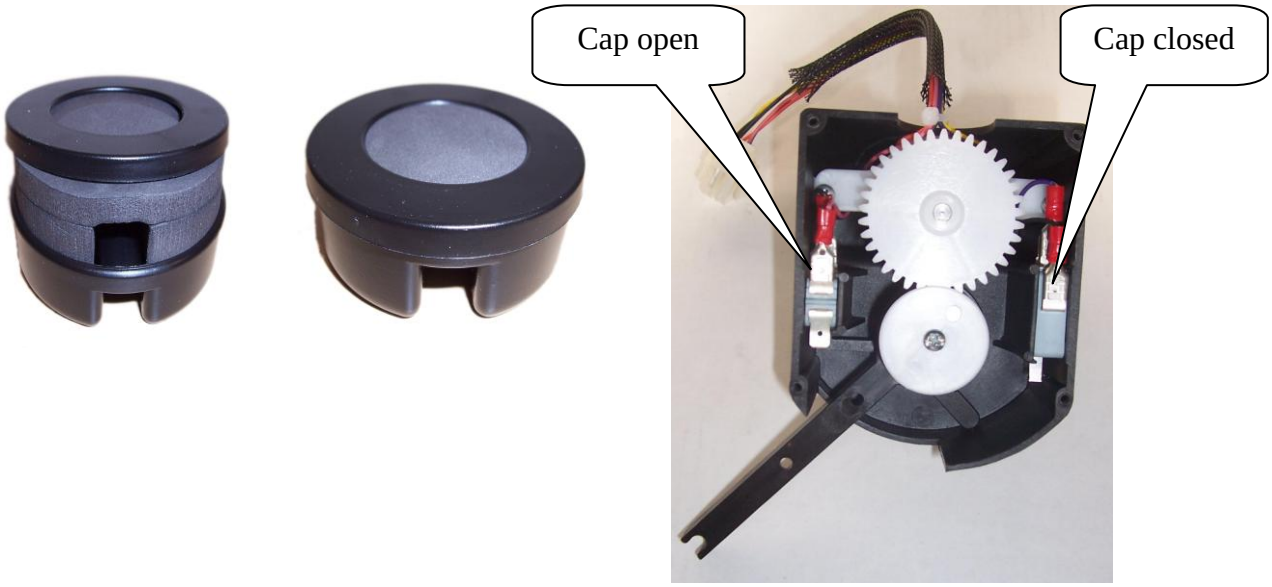


AUTOMATIC CAP



The Eureka dispenser is equipped of an automatic cap, necessary to avoid the exsiccation of the colorants. Set the “suck back” function with the software parameters in the correct way, to avoid problems of contamination or dripping of colorant. The cap, with a completely automatic process, open before each dosage and close at the end of it; with this device the possibility of exsiccation of the products is largely reduced. The part of the cap containing the sponge is simply extractable, so the operation of cleaning results very rapid, as shown in the pictures below.
Inside the cap case there are two micro-switches that control the two positions of the automatic cap. The automatic cap have been engineered to be simple and rapid to extract. In case of substitution, disconnect the power supply connection and pull the cap in the sense of the front of the machine; the fixing hooks will release and the cap will slide out. Now the new automatic cap can be positioned and fixed without using any tool.

Is very important to keep the sponge clean and humid to preserve the good working of the dosages, so we advise to do regularly the operations of cleaning and moisturizing.

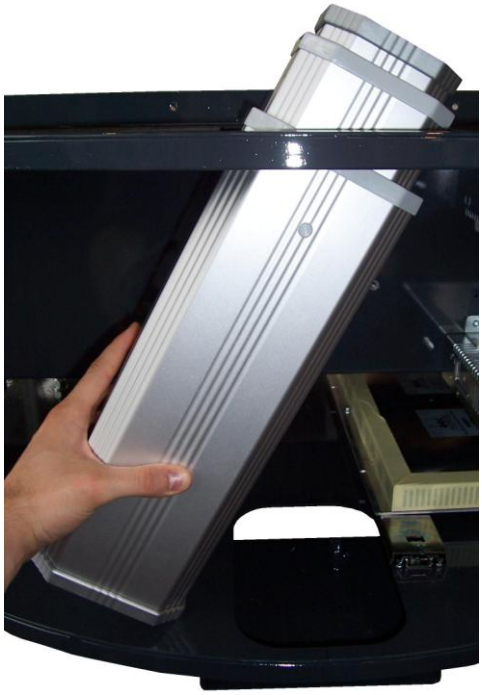


TELESCOPIC ELEVATOR

The automatic dispenser Eureka is equipped of a telescopic elevator for the lifting of the supporting plane for cans; this device permit that even the little cans can be positioned very near to the dosage nozzles.
The elevator driving buttons are positioned onto the top of the machine.

In case of necessary substitution of the telescopic column, please proceed as explained below:

- Switch off the machine and disconnect the plug of the electrical power supply.
- Remove the supporting plane for cans after the removal of the four screws under the overturnable plane.
- Remove the four screws that fix the telescopic column to the base plate of the machine.
- Open the two front doors; please take care of the cables connected to the doors.
- Remove the horizontal fixing of the telescopic column.
- Remove the electrical connection of the telescopic column and extract it (pull it up, incline it on the right and extract it on the left carefully).
- Locate the new telescopic column into the machine as shown in the pictures **a**, **b**, **c**.



Picture **a**

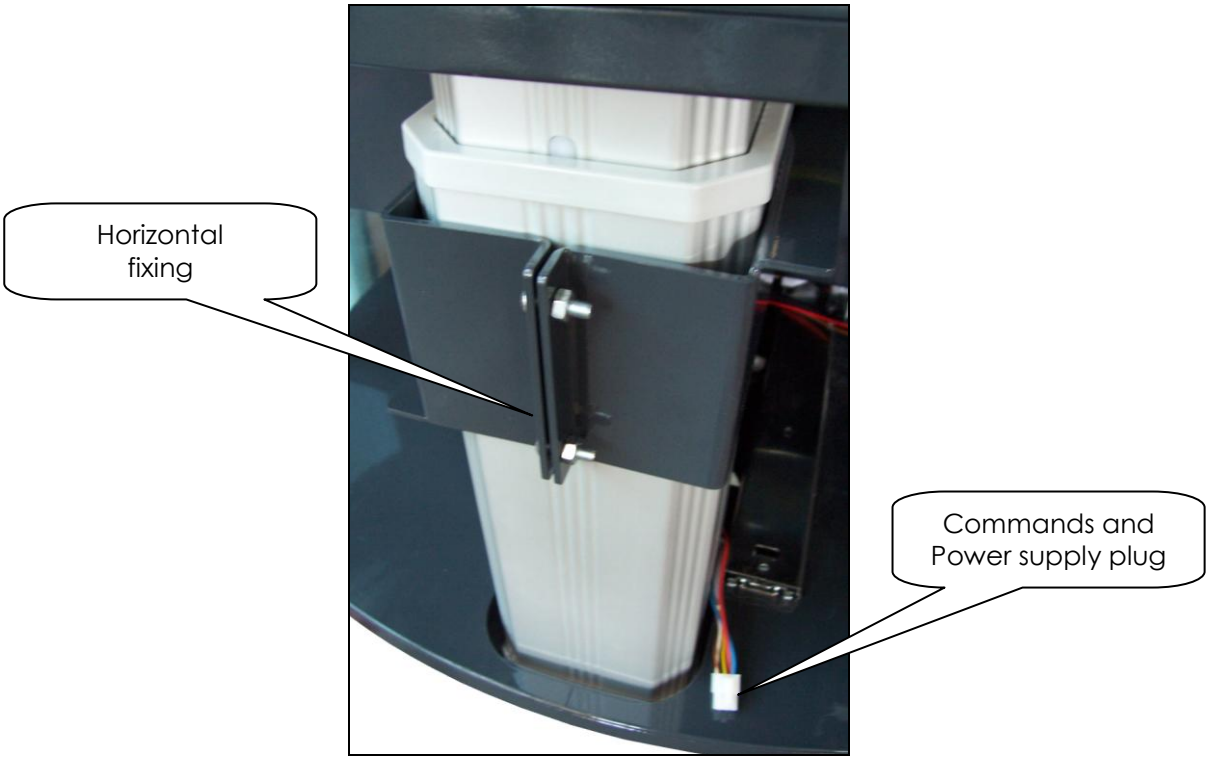
Picture **b**

Picture **c**

- Fix the new telescopic column with the four screws previously removed (Picture **d**).
- Fix the supporting plane for cans onto the top of the telescopic column with the four screws previously removed (Picture **e**).
- Reassemble the horizontal fixing of the telescopic column with the screws previously removed (Picture **f**).
- Connect the electrical plug for the power supply of the telescopic column (Picture **f**).
- Close the front doors of the machine.
- Reconnect the electrical plug for the power supply of the machine.

Picture **d**

Picture **e**



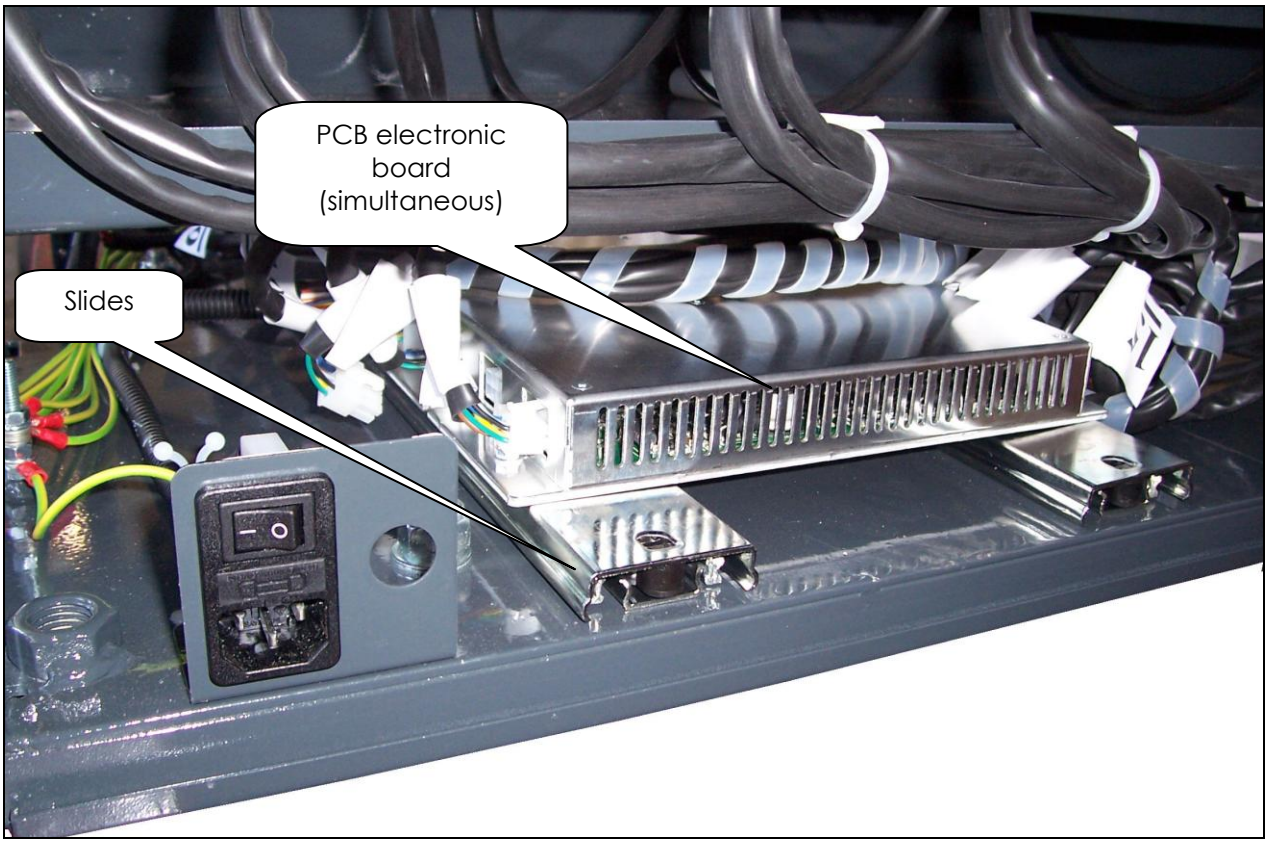
Picture **f**

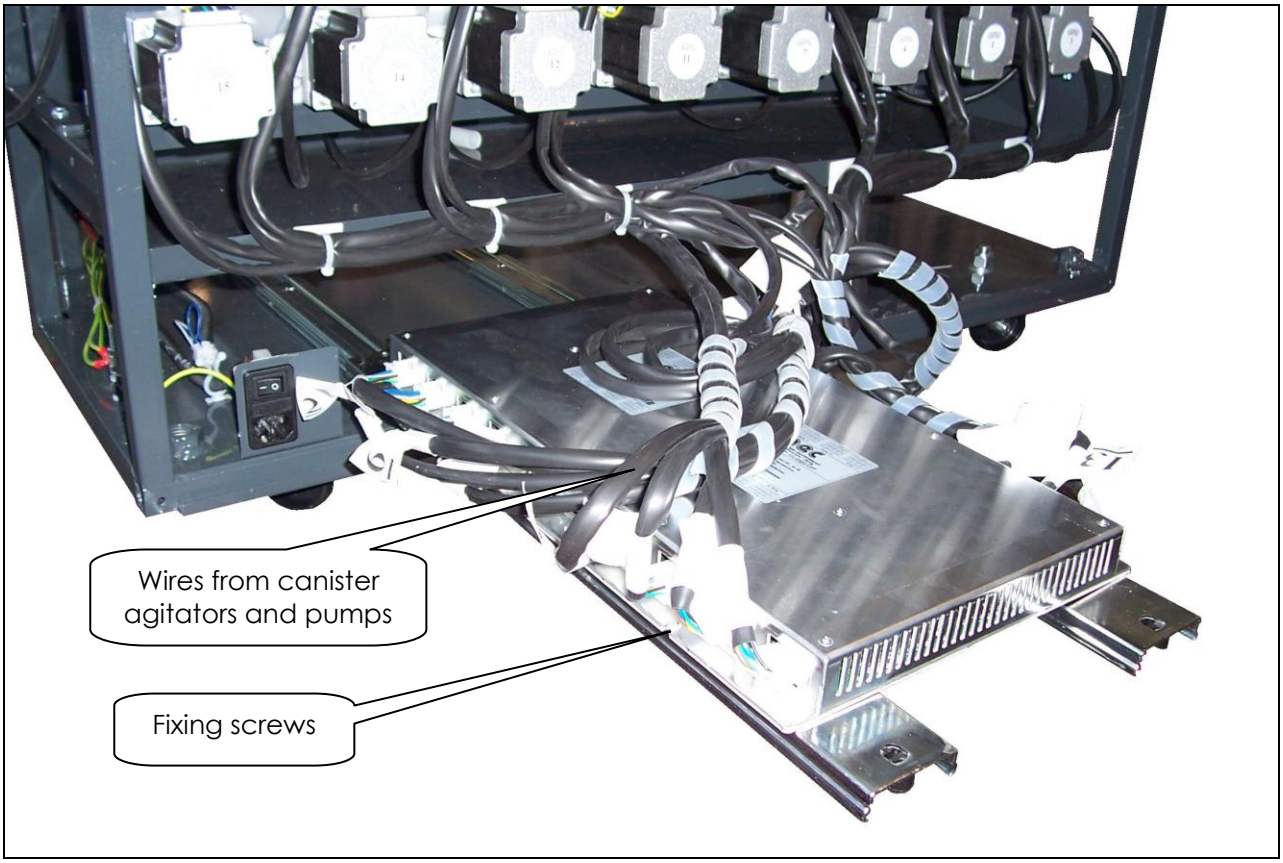
SIMULTANEOUS ELECTRONIC BOARD

The Eureka automatic dispenser realize all its functions thanks to the PCB electronic board located onto the base of the machine. The simultaneous model permit to the machine to do dosages of many colorants simultaneously. The PCB electronic board is fixed on two practical slides that make it simply extractable; thanks to this device, the PCB board is accessible for maintenance or eventual substitution.

In case of necessary substitution of the PCB electronic board, please proceed as explained below:

- Switch off the machine and disconnect the plug of the electrical power supply.
- Remove the transparent cover from the rear of the machine.
- Extract carefully the PCB electronic board; please take care of all the cables connected, to avoid any damage.
- Disconnect all the connected plugs from the PCB electronic board.
- Remove the three screws that fix the board onto the slides; pull out the PCB board.
- Locate the new PCB electronic board onto the slides and fix it with the screws previously removed; this positioning is univocal.
- Reconnect the wires from canister agitators and pumps; please respect the correspondence of circuit number with its connection onto the PCB board.
- Reconnect the two power supply connections, the connection for auxiliary Inputs and Outputs, and the USB connection.
- Push carefully the PCB board to put it again into the machine.
- Locate and fix the rear transparent cover; please take care of the power supply cable and of the USB wire.
- Reconnect the electrical plug for the power supply of the machine.


PCB electronic board (simultaneous)
Slides

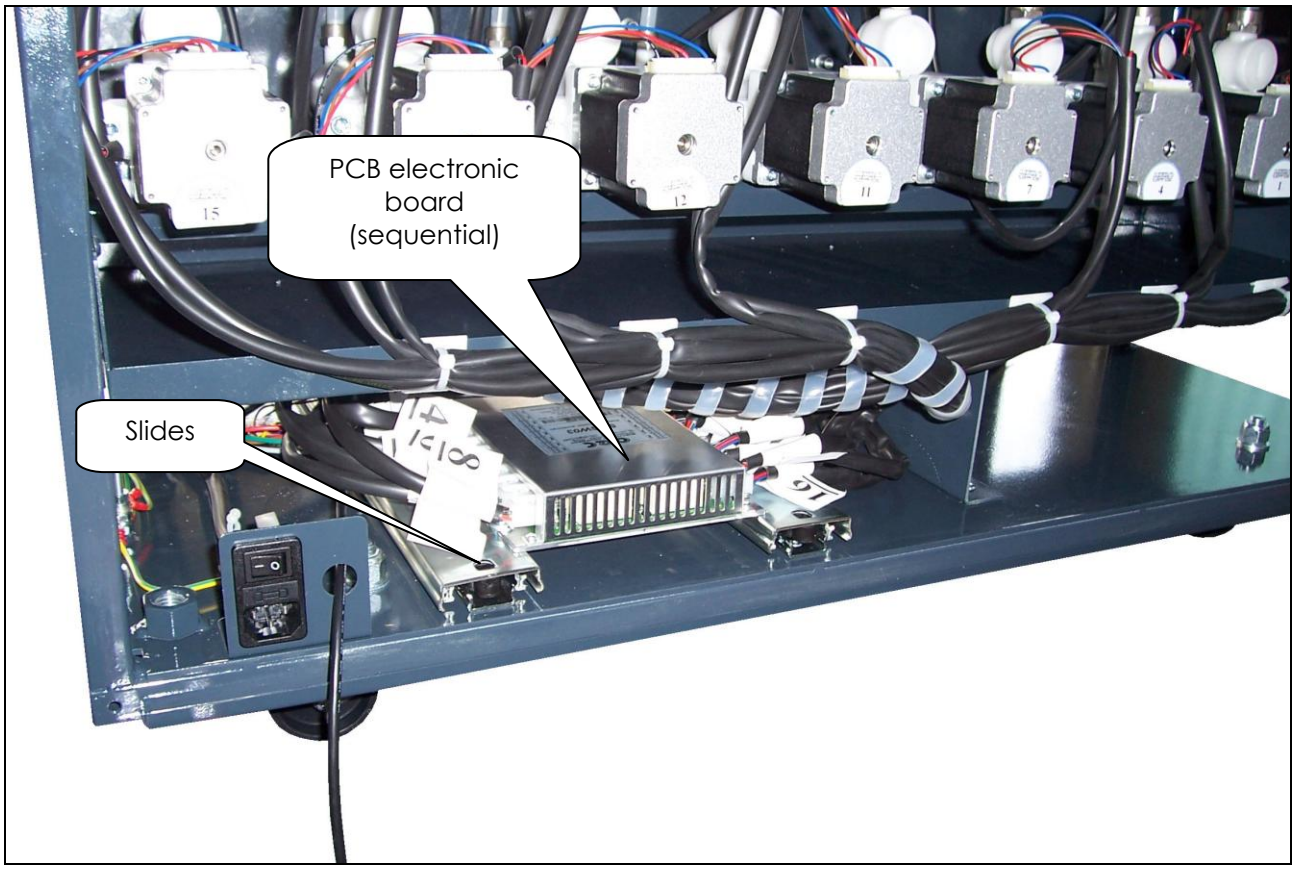

Wires from canister agitators and pumps
Fixing screws

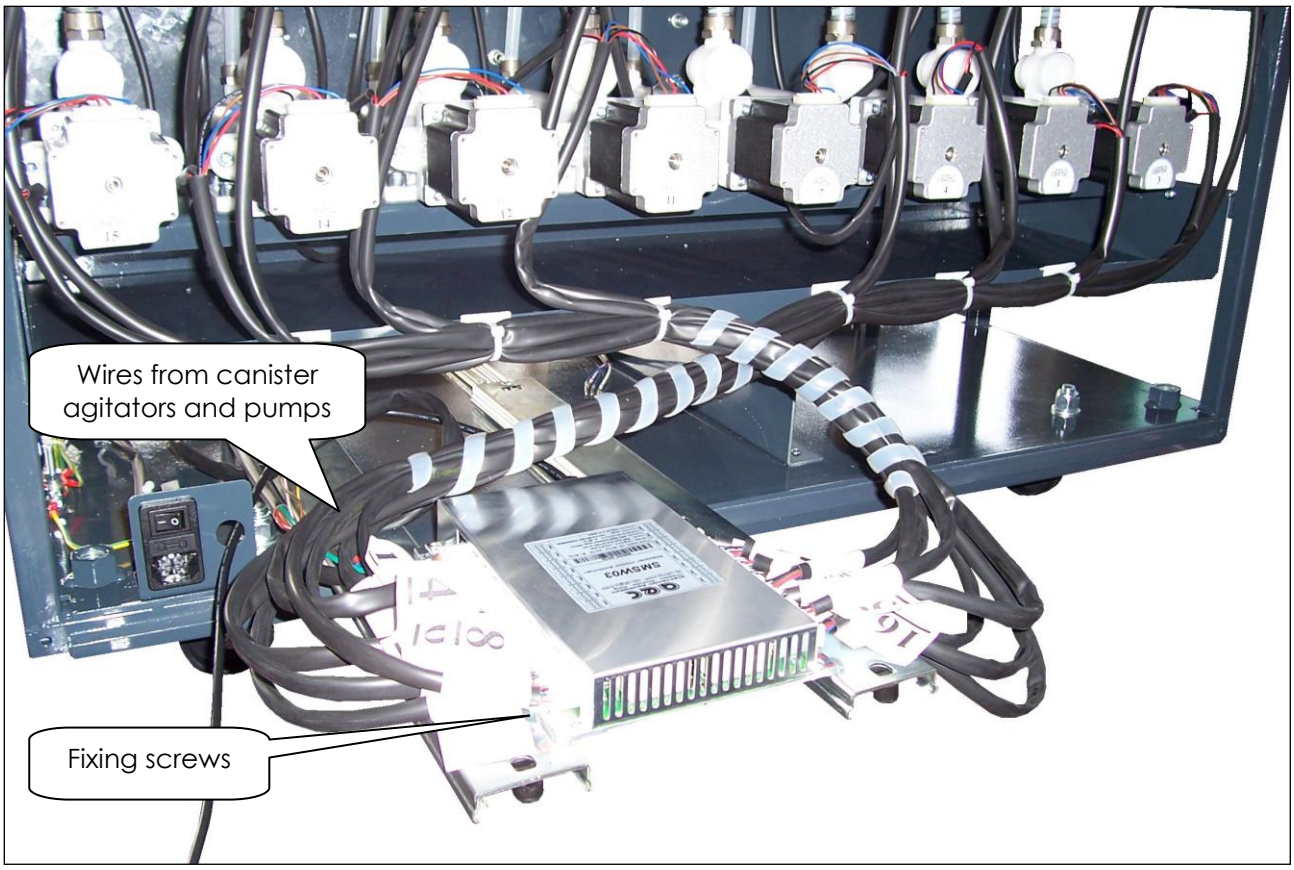
SEQUENTIAL ELECTRONIC BOARD

The sequential electronic board permit to the machine to do dosages of only one colorant sequentially. Analogously to the simultaneous electronic board, it is fixed on two practical slides that make it simply extractable; thanks to this device, the PCB board is accessible for maintenance or eventual substitution.

In case of necessary substitution of the PCB electronic board, please proceed as explained below:

- Switch off the machine and disconnect the plug of the electrical power supply.
- Remove the transparent cover from the rear of the machine.
- Extract carefully the PCB electronic board; please take care of all the cables connected, to avoid any damage.
- Disconnect all the connected plugs from the PCB electronic board.
- Remove the three screws that fix the board onto the slides; pull out the PCB board.
- Locate the new PCB electronic board onto the slides and fix it with the screws previously removed; this positioning is univocal.
- Reconnect the wires from canister agitators and pumps; please respect the correspondence of circuit number with its connection onto the PCB board.
- Reconnect the power supply connection, the connection for auxiliary Inputs and Outputs, and the USB connection.
- Push carefully the PCB board to put it again into the machine.
- Locate and fix the rear transparent cover; please take care of the power supply cable and of the USB wire.
- Reconnect the electrical plug for the power supply of the machine.


PCB electronic board (sequential)
Slides

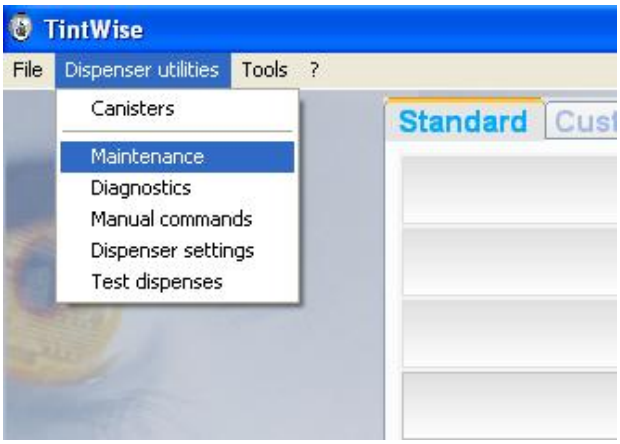

Wires from canister agitators and pumps
Fixing screws

DISPENSE TUBE SUBSTITUTION

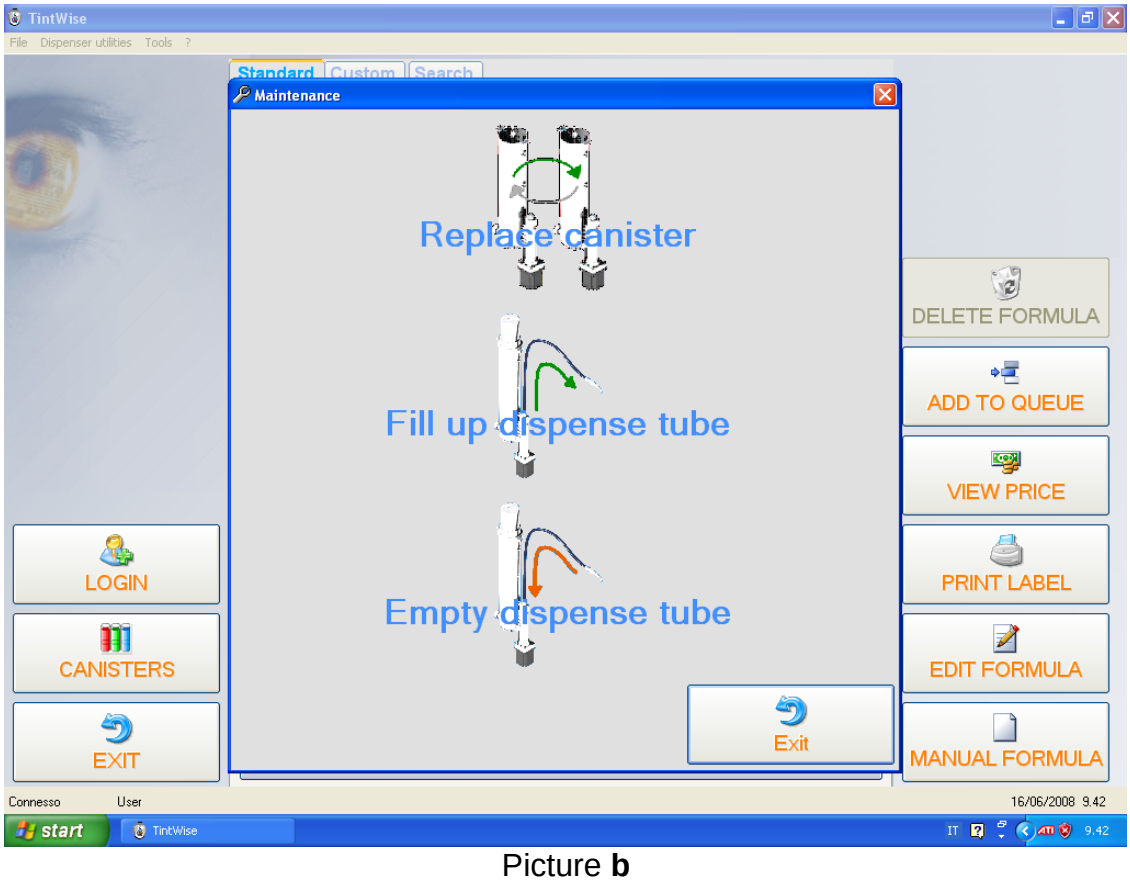
The Eureka automatic dispenser execute its dosages through the dispense tubes of the machine; these are that pipes that connect the delivery side of the pumps with the dosage head situated in the front part of the machine.

In case of necessary substitution of a dispense tube, please proceed as explained below:

- Implement the “empty dispense tube” operation, launching it with the managing software of the machine; select **Dispenser utilities / Maintenance** and click on the **Empty dispense tube** button in the maintenance window (Pictures **a** and **b**).

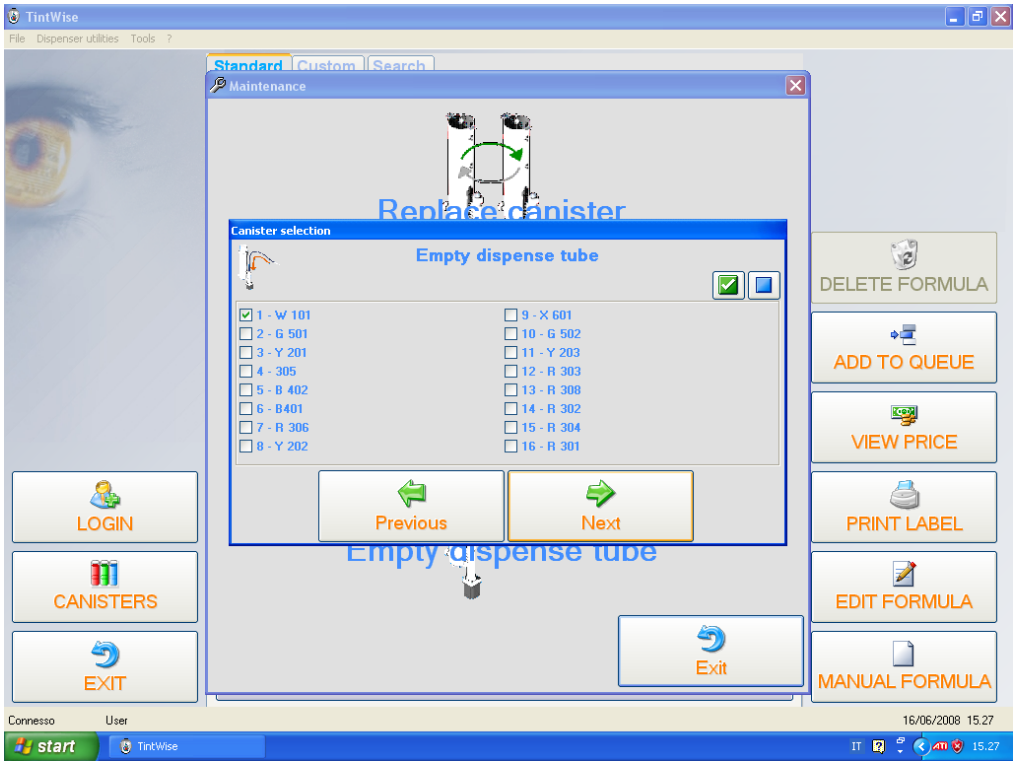


Picture **a**

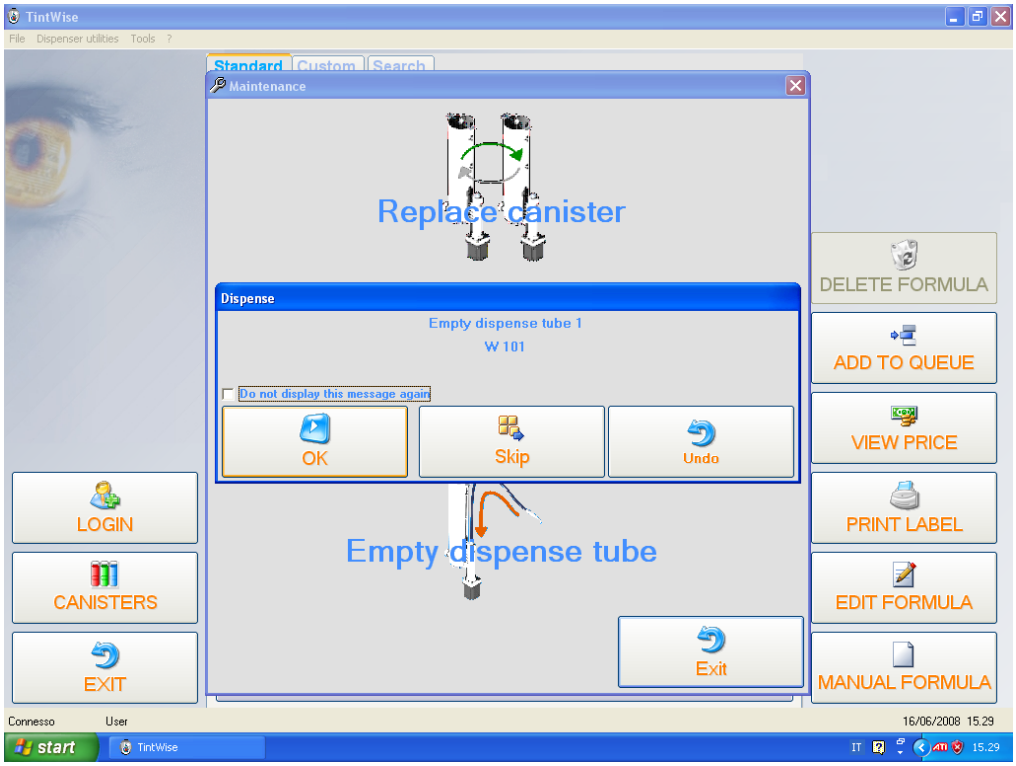


Picture **b**

- Select the circuit that have to be emptied and click on **Next** button in the canister selection window; click on the **Ok** button in the dispense window (Pictures **c** and **d**).

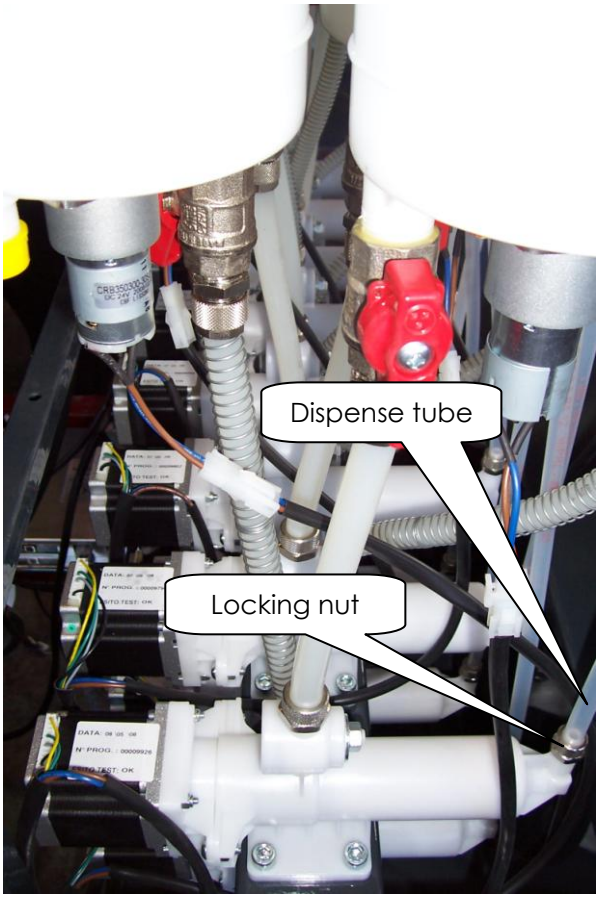


Picture **c**

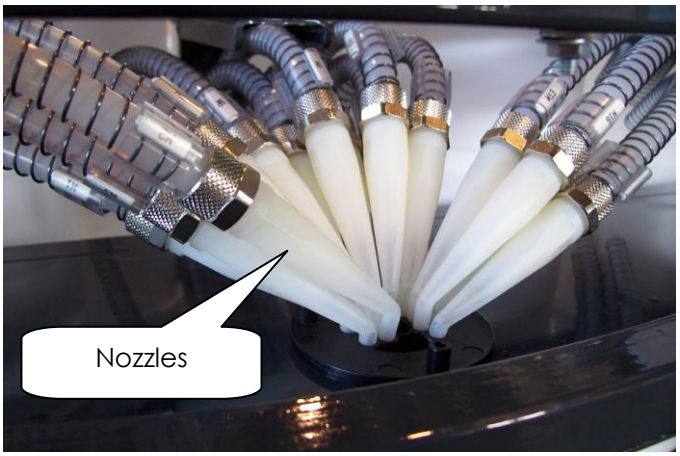


Picture **d**

- When the “empty dispense tube” operation is finished, switch off the machine and disconnect the plug of the electrical power supply.
- Remove the transparent cover from the rear of the machine, taking care of the power supply cable and of the USB wire.
- Remove the blue cover from the front part of the machine.
- Screw out the locking nut that fix the pipe that have to be substituted (Picture **e**).
- Disconnect carefully the pipe from the delivery side of the pump.
- Extract carefully the nozzle of the pipe that have to be substituted from the dosage head situated in the front part of the machine (Picture **f**).
- Withdraw carefully the dispense tube that have to be substituted and insert the new one.
- Fit carefully the new pipe onto the delivery side of the pump and fix it screwing the locking nut previously removed.
- Insert delicately the new nozzle into the respective space of the dosage head.
- Locate and fix the front blue cover and the rear transparent cover; please take care of the power supply cable and of the USB wire.
- Reconnect the electrical plug for the power supply and switch on the machine.
- Implement the “fill up dispense tube” operation, launching it with the managing software of the machine; the procedure is absolutely similar to the operation of “empty dispense tube” (Pictures **a**, **b**, **c**, **d**).



Picture **e**



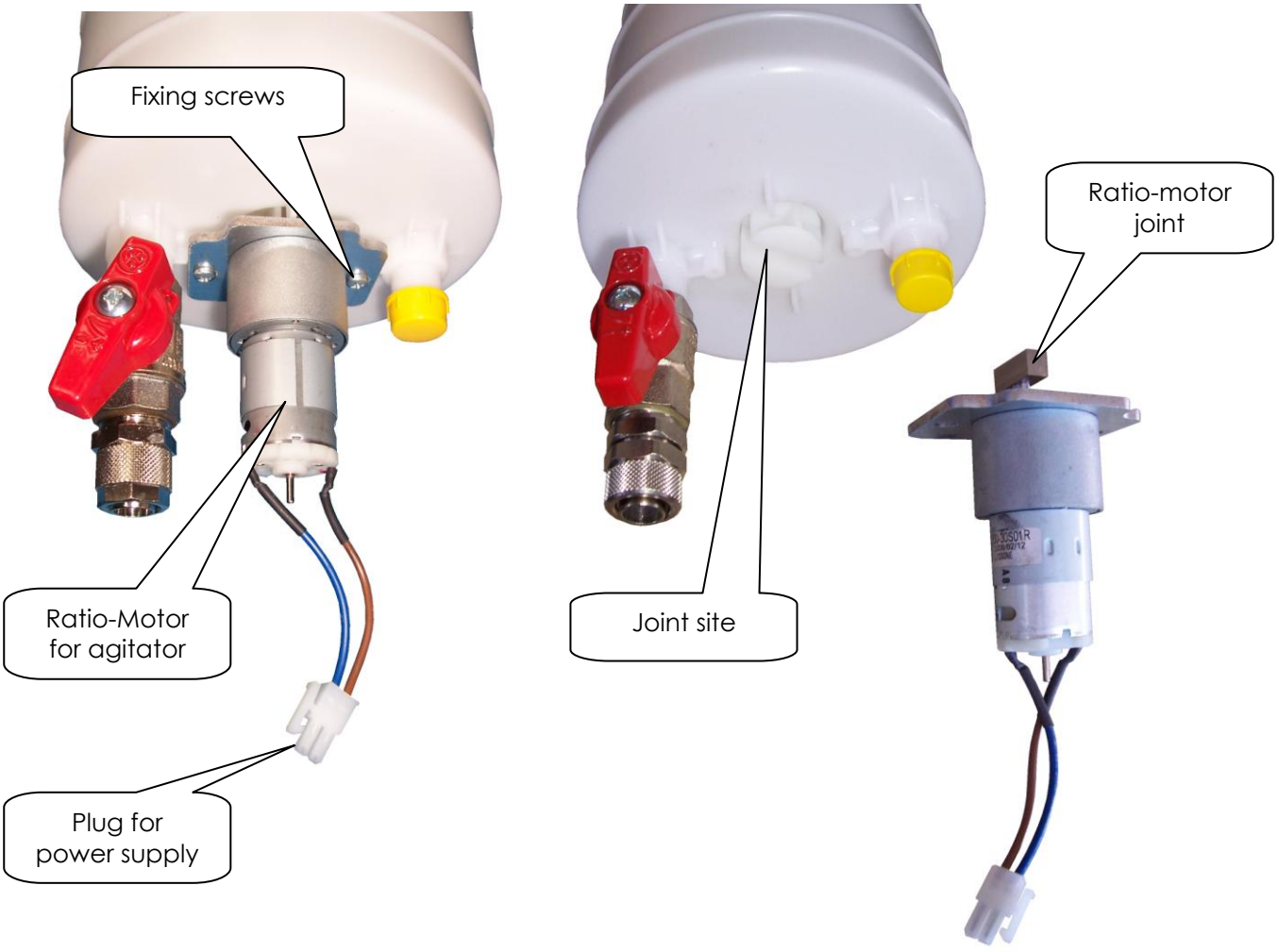
Picture **f**

RATIO-MOTOR SUBSTITUTION

The canisters of the Eureka dispenser are provided of an agitation system for the products contained. The rotation of the agitator blades is done by an electrical ratio-motor, located onto the bottom of each canister.

In case of necessary substitution of a ratio-motor, please proceed as explained below:

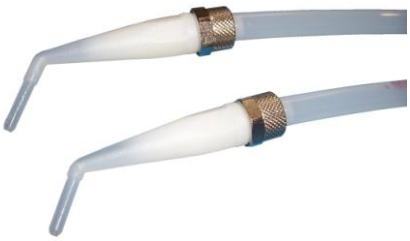
- Switch off the machine and disconnect the plug of the electrical power supply.
- Remove the transparent cover from the rear of the machine, taking care of the power supply cable and of the USB wire.
- Disconnect the plug for the electrical power supply of the ratio-motor of the wanted canister.
- Remove the two fixing screws and extract carefully the ratio-motor.
- Locate the new ratio-motor, putting the joint into the appropriate site onto the bottom of the canister; fix the new ratio-motor with the two screws previously removed.
- Reconnect the plug for the electrical power supply of the ratio-motor.
- Locate and fix the rear transparent cover; please take care of the power supply cable and of the USB wire.
- Reconnect the electrical plug for the power supply of the machine.



SPECIFICATIONS OF THE PRODUCT

Description:	EUREKA Automatic Dispenser
Capacity:	Max 32 canisters, 5 litres and 3 litres
Pumps:	For each canister is associated a progressive cavity pump. The pump rotors are made of metal treated with a hardening chroming so as to increase abrasion resistance. The stators are made of Viton elastomer. The materials used for the pumps are compatible with water-based pastes.
Pump speed:	Variable and to be established depending on the colorants and the surrounding conditions. Maximum speed is 0,3 litres/min (A-450) and 0,6 litres/min (A-550)
Nozzle cleaning:	Colorant suction system when dosing ends, to avoid colorant encrustations forming on the nozzles. Semi automatic humidifying cap.
Canister mixing:	Each canister is provided with a lid in which the mixing motor is installed.
Canister “frame”:	The canisters are assembled on a rotating board. The board is rotated by hand and is needed to position the canister to be filled in front of you.
Can detector:	Reflection-photocell to detect the can.
Power supply:	It can vary from 110 to 240 Volts with a 50 or 60 Hz frequency, depending on the type of power supply.
Dimensions:	Height 1150 mm Width 950-1400 mm Depth 750-900 mm Weight 180-270 Kg
Packing dimensions:	EUREKA 16 980 x 760 x 1370 (h) EUREKA 24 1370 x 760 x 1370 (h) EUREKA 32 1430 x 880 x 1370 (h)

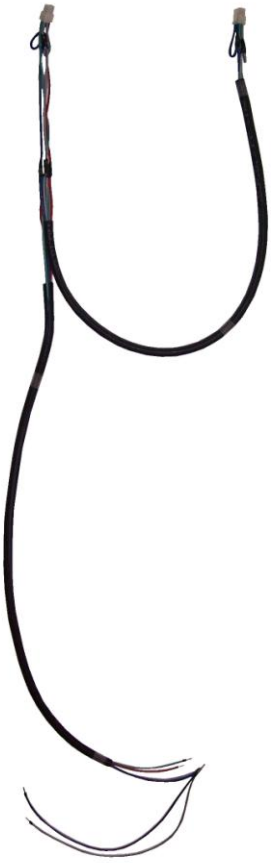
RECOMMENDED SPARE PARTS

CODE	*DESCRIPTION*	*PICTURE*
PNI03.01.200	Cartridge pump	
ARCHI01.026.2 e ARCHI01.035.2	Nozzle with low terminal and Nozzle with high terminal	
AC01.000	Automatic cap	
MR R40C-300-24V1	Ratio-motor 24Vdc i = 1/300	

RECOMMENDED SPARE PARTS

CODE	*DESCRIPTION*	*PICTURE*
CT SIR 300-24H456	Telescopic column, 3 stages, stroke 300 mm, H = 456 mm, 24 Vdc	
EUR01.SCHEDA.00 Or ARCHI01.SCHEDA.00	PCB electronic board “Open – Frame” SIMULTANEOUS or SEQUENTIAL	
ASW 24V-13A	Switching Power supplier 24 Vdc, 13 A	
ASW 67V-4.8A	Switching Power supplier 67 Vdc, 4,8 A	

RECOMMENDED SPARE PARTS

CODE	*DESCRIPTION*	*PICTURE*
EL.CAV.013	Wire for main power supply	
EL.CAV.014	Wire for power supply of N° 1 PCB electronic board	

RECOMMENDED SPARE PARTS

CODE	*DESCRIPTION*	*PICTURE*
EL.CAV.015	Wire for auxiliary Inputs and Outputs for N° 1 PCB electronic board	
EL.CAV.016 EL.CAV.017 EL.CAV.018 EL.CAV.019	Wire for command of canister agitation and pump; lenghts L1, L2, L3, L4	

DAMAGE OR BREAK DOWN CHART

The following chart illustrating “problem, cause and solution” should be used to personally solve any problems that could arise, before contacting our back up service.

When in doubt, please contact HERO EUROPE S.r.l.’s back up service before implementing any solutions personally.

PROBLEM	***CAUSE***	***SOLUTION***
Colorant leakage from the flange connecting the pump motor to the canister	Broken pump	Cartridge pump replacement
Colorant dripping from the nozzle	• Air in the circuit • The drip-free device parameter not correctly programmed	• Purge the circuit until you see a regular colorant flow, free from air bubbles • Program the drip-free device parameter correctly
When dosing ends the colorant goes back towards the canister through the nozzle thus emptying the circuit	Worn pump	Cartridge pump replacement
Whilst functioning, the circuit doses in a noisy, irregular way	• The connecting cable between the electronic card and the pump motor is not properly engaged • Damaged connecting cable between the electronic card and the motor • Motor has broken down • Electronic card is not working • Stalled pump	• Check that the cable between the electronic card and the motor is properly engaged on both sides • Substitute the connecting cable between the electronic card and the motor • Cartridge pump replacement • Substitute the electronic card • Start the pump by hand slowly until it unblocks. Increase the purging frequency and if necessary intervene on the colorant by thinning it
• The sensors don’t work and/or • The pump motors don’t work and/or • The mixing motors don’t work and/or • The connection between the PC and the machine is no longer functioning	• No power supply • The machine power cable is disconnected • The power cable for the electronic card is not well plugged in • A fuse is interrupted	• Verify if the power supply is coming through • Connect the machine power cable to the power socket • Make sure the power cable and the electronic card are well plugged in • Substitute the fuse

The pump motor functions regularly, however, no colorant comes out of the nozzle	• No colorant inside the canister • The canister nozzle is obstructed • The pump is damaged	• Add colorant to the canister and purge the circuit abundantly to eliminate any air • Replace the nozzle. Furthermore, verify that the colorant paste has not thickened. If it has, inform the paste manufacturer. • Cartridge pump replacement
The colours are difficult to reproduce	• The nozzles are dirty • Different quality of colorant pastes • Thickened paste/s • Colorant is leaking from the circuit • Temperature is too low • Circuit/s calibration is incorrect	• Carry out one or more purges until the nozzles are clean • Speak to the paste supplier • Substitute the paste/s • Cartridge pump replacement • Increase room temperature • Implement the circuit/s calibration
The images on the monitor are not clear or inexistent	• Monitor is turned off • Cable/s are not well plugged in • Image adjustment is too dark • Monitor failure	• Turn on the monitor • Check the cables • Set the image up properly • Replace the monitor
The keyboard and/or the mouse don't work	• Cable/s are not well plugged in • Cable/s are damaged • Keyboard and/or mouse are not working • Wrong set up	• Check the cables • Substitute the cables • Replace the mouse and/or the keyboard • Verify the set up
The mixing process of one or more canisters does not function	• The motor connecting cable is not well connected • The mixing motor is damaged • The cable is damaged • The electronic card is damaged	• Check that the cable is well connected • Substitute the lid on which the mixing motor is positioned • Substitute the cable • Substitute the electronic card
The pump motor doesn't work	• The motor is jammed	• Instructions at page 30
Elevator does not work	• The cable is not well connected • The cable is damaged • The electric actuator is broken	• Check cable connection • Substitute the cables • Substitute electric actuator

If necessary, please contact HERO EUROPE 's back up service. When doing so, be sure to have the machine matriculation number which can be found on the identification plate inside the upper door.

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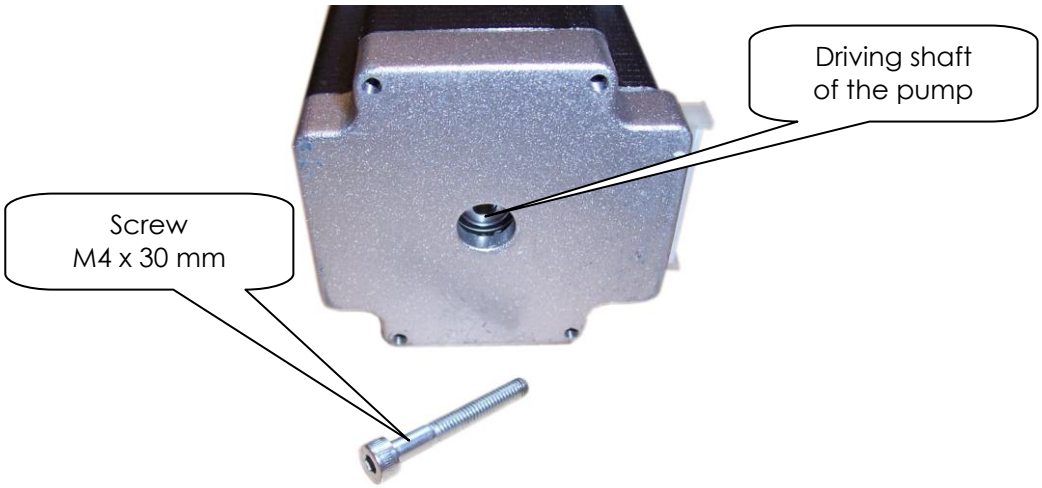
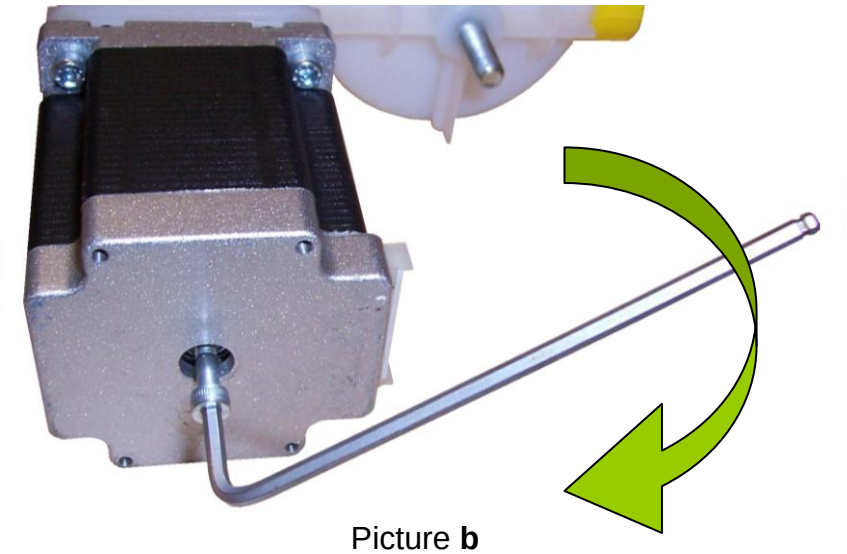
SOLUTION in case of PUMP MOTOR JAMMED

In case of jamming of the motor of a pump, it is possible to occur manually and try to re-establish the correct functioning of the pump. Please proceed as explained below:

- Switch off the machine and disconnect the plug of the electrical power supply.
- Remove the transparent cover from the rear of the machine, taking care of the power supply cable and of the USB wire.
- Screw into the driving shaft of the pump (threaded hole in the rear of the pump) a screw M4, with the threaded part of a minimum length of 30 mm (Picture **a**).
- Screw for all the depth of the hole; continue to screw to put in motion the rotor of the pump. Keep this rotation for some complete rounds (Picture **b**).
- Remove the screw previously put into the driving shaft of the pump.
- Locate and fix the rear transparent cover; please take care of the power supply cable and of the USB wire.
- Reconnect the electrical plug for the power supply and switch on the machine.



Picture **a**



Picture **b**

Standard parameter value chart

The following chart shows the parameters related to running a machine together with their respective default values.

PARAMETER	MEANING	DEFAULT VALUE
Mixing – Time ON Mixing – Time OFF	Mixing time ON Mixing time OFF	1 min – 0 sec 120 min – 0 sec
Pumps – acceleration	Pump motor acceleration speed	1000 When the value increases acceleration also increases
Pumps - deceleration	Pump motor deceleration speed	1500 When the value increases, deceleration also increases
Pumps – Boost time	Time in which the pump motor receives the maximum power supply	30 sec
Pumps – Start speed	Pump starting speed	15% (75 r.p.m.)

Canister Page

Dosing speed	Pump dosing speed expressed as a percentage in regards to the maximum value	60% (300 r.p.m.) It is possible to set 75% (300 r.p.m. – 0,2 l/min)as a max value when calibrating
Purging - ml	Ml to deliver during the purping	1 ml
Purging - Speed	Pump speed during the purging phase	25% (125 r.p.m.) The above value corresponds to the maximum speed of the step motor torque
Drip-free device - Steps	Number of pump motor steps during the phase in which the drop is “sucked up”	40 (0,1 r. – 0,07 cc)
Drip-free device – Waiting time	Waiting time, after each dosing has ended, before the drip-free device phase is implemented	3 sec
Capacity	Canister capacity	3 – 5 litres
Warning level	Below this level you are warned to fill the canister	0,4 litres
Alarm level	Below this level dosing is no longer permitted	0,2 litres
Steps alarm	Number of motor steps possible before proceeding with a precautionary substitution	1.013.854.085 steps (1.760,00 litres)
Purging alarm	Maximum time lapse without purging, between one dosing and the other of the same colorant	6 hours

Calibration Page

Drop Calibration	Quantity minimum calibrated	
Threshold Calibration	Machine Calibration	

The theoretical value shifted with one complete rotation of the pump is 0,6944 cc, measured with water at an approximate temperature of 25 °C.

576,05346 steps of the motor are necessary to dose 1cc. Such value is programmed in the dispenser as being the standard calibration value.

Images of the parameters